



POST DOCTORAL RESEARCH ASSOCIATE

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Lauren Birgenheier

PROFESSIONAL RESEARCH INTERESTS AND EXPERTISE –

- Sedimentology
- Stratigraphy
- Paleoclimate
- Stable Isotope Geochemistry
- Sequence Stratigraphy

PROFESSIONAL EXPERIENCE –

- Sydney Basin and Tamworth Belt, Eastern Australia
- Henry Mountain Basin, Southeast Utah

EDUCATION –

- B.A. in Geology (with distinctions), Colorado College, Colorado Springs
- Ph.D. in Geoscience (geology specialization), University of Nebraska-Lincoln

MEMBERSHIPS –

- American Association of Petroleum Geologists (AAPG)
- Geological Society of America (GSA)
- Society for Sedimentary Geology (SEPM)
- International Association of Sedimentologists (IAS)

- Association for Women Geoscientists (AWG)

HONORS AND AWARDS–

- 2007 Geological Society of America Coal Division Best Paper at 2006 GSA Annual Conference
- 2007 Myerly-Martin Prize for excellence in Graduate Research: University of Nebraska-Lincoln, Department of Geosciences
- 2005 Geological Society of America 2005 Graduate Student Research Grant
- 2005 International Association of Sedimentologists Postgraduate Grant Scheme
- 2004-2007 Othmer Fellow, University of Nebraska-Lincoln
- 2002 Phi Beta Kappa
- 2002 Outstanding Senior Geology Student: Rocky Mountain Assoc. of Geologists
- 2002 Award for Excellence: Association of Women Geologists
- 2002 Patricia Buster Research Scholarship
- 2002 Donald. B. Gould Research Scholarship

PUBLICATIONS –

- **Birgenheier, L.P.**, Fielding, C.R., Rygel, M.C., Frank, T.D., Roberts, J., in revision, Evidence for dynamic climate change on sub-106-yr scales from the late Paleozoic glacial record, Tamworth Belt, New South Wales, Australia, *Journal of Sedimentary Research*.
- Fielding, C.R., Frank, T.D., **Birgenheier, L.P.**, Rygel, M.C., Jones, A.T., Roberts, J., in press, The stratigraphic imprint of the late Paleozoic ice age in eastern Australia: a record of alternating glacial and non-glacial intervals, *GSA Special Publication*.
- Frank, T.D., **Birgenheier, L.P.**, Montañez, I.P., Fielding, C.R., Rygel, M.C., in press, Controls on late Paleozoic climate revealed by comparison of near-field stratigraphic and far-field stratigraphic stable isotopic records, *GSA Special Publication*.
- Rygel, M.C., Fielding, C.R., Bann, K., Frank, T.D., **Birgenheier, L.P.**, & Tye, S.C., in press, The early Permian Wasp Head Formation, Sydney Basin, High-latitude shallow marine sedimentation following the late Asselian-early Sakmarian glacial event in eastern Australia, *Sedimentology*.
- Rygel, M.C., Fielding, C.R., Frank, T.D., **Birgenheier, L.P.**, in press, Magnitude of late Paleozoic glacioeustatic fluctuations: a synthesis, *Journal of Sedimentary Research*.
- Fielding, C.R., Frank, T.D., **Birgenheier, L.P.**, Rygel, M.C., Jones, A.T., Roberts, J., 2008, Alternating glacial and non-glacial intervals characterize the late Paleozoic Gondwanan Ice Age: stratigraphic evidence from eastern Australia, *Journ. Geol. Soc. Lon.*, v. 165, p.129-140.
- **Birgenheier, L.P.**, 2007, A sedimentologic, stratigraphic, and geochemical study of the late Paleozoic ice age, eastern Australia, Ph.D. thesis, University of Nebraska-Lincoln, 263p.
- Montanez, I.P., Tabor, N.J., Niemeier, D., DiMichele, W.A., Frank, T.R., Fielding, C.R., Isbell, J.L., **Birgenheier, L.P.**, Rygel, M.C., 2007, CO₂-forced climate instability and linkages to tropical vegetation during late Paleozoic deglaciation, *Science*, v. 315, p. 87-91.
- Myrow, P.M., **Tice, L.***, Archuleta, B., Clark, B., Taylor, J.F., & Ripperdan, R.L., 2004, Flat-pebble conglomerate: its multiple origins and relationship to meter-scale depositional cycles. *Sedimentology*, v. 51, p. 973-996.

* Maiden name is Tice.

FIRST-AUTHORED ABSTRACTS –

- **Birgenheier, L.P.**, Fielding, C.R., Rygel, M.C., Frank, T.D., 2008. Stratigraphic and sedimentologic evaluation of the Carboniferous ice-proximal record from eastern Australia

reveals climatic variation on multiple timescales. Abstracts Volume, American Association of Petroleum Geologists Annual Meeting, San Antonio, TX, April 20-23, v.17, p.18.

- **Birgenheier, L.P.**, Fielding, C.R., Rygel, M.C., Frank, T.D., 2007. Evidence for dynamic climate change on timescales of <1-5.5 m.y. from the Carboniferous ice-proximal record, New South Wales, Australia. Abstracts with Programs, Annual Geological Society of America National Meeting, Denver, Colorado, October 28-31, v. 39, no. 6, paper no. 130-6.
- **Birgenheier, L.P.**, Fielding, C.R., Frank, T.D., Rygel, M.C., 2007. Nested cyclicity in the Carboniferous glacial record from New South Wales, Australia. Abstracts Volume, American Association of Petroleum Geologists Annual Meeting, Long Beach, CA, April 1-4, v. 16, p. 46.
- **Birgenheier, L.P.**, Frank, T.D., Fielding, C.R., Rygel, M.C., 2006. The Permian stable isotope record from ice-proximal localities in eastern Australia: a proxy for late Paleozoic climate change. Abstracts with Programs, Annual Geological Society of America National Meeting, Philadelphia, Pennsylvania, October 22-25, v. 38, no. 7, paper no. 127-10.
- **Birgenheier, L.P.**, Fielding, C.R., Frank, T.D., Rygel, M.C., & Roberts, J., 2006. Lithologic consequences of glacially influenced deposition: a case study from the late Paleozoic of New South Wales, Australia. Abstracts Volume, American Association of Petroleum Geologists Annual Meeting, Houston, Texas, April 9-12, v. 15, p. 11.
- **Birgenheier, L.P.**, Fielding, C.R., Frank, T.D., & Roberts, J., 2005. Stratigraphic record of late Paleozoic Gondwanan Ice Age in New South Wales, Australia: A review and revision of the Carboniferous System. Abstracts with Programs, Annual Geological Society of America National Meeting, Salt Lake City, Utah, October 16-19, v. 37, no. 7, paper no. 112-9.
- **Tice, L.P.***, Myrow, P.M., Taylor, J.F., Ripperdan, R.L., & Ethington, R.L., 2002, Stratigraphy and sedimentology of the Cambrian and Ordovician Gallatin formation, Wyoming and Montana. Abstracts with Programs, Annual Geological Society of America National Meeting, Denver, Colorado, October 27-30, 2002, p. 138.

*Maiden name is Tice.